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Organization administration and evaluation of a driver education and training course in Sidney Public High School

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ORGANIZATION, ADMINISTRATION, AND EVALUATION OF A DRIVER EDUCATION AND TRAINING COURSE IN SIDNEY PUBLIC HIGH SCHOOL

by

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CHAPTER I

INTRODUCTION

The school board of District No. 5, Sidney, Richland County, Montana approved the inauguration of a Driver Education and Training Course in Sidney Public High School. This course was included in the high school curriculum beginning with the 1949-50 school term. The author was appointed by the superintendent of the school as instructor of the course. The instructor was asked to prepare himself to set up and teach a course that would train about eighty students per year, utilizing five forty-five minute periods per day. He was also asked to keep the cost as low as possible while attempting to maintain minimum requirements, suggested by authorities, for the course.

I. THE PROBLEM

Statement of the problem. The purpose of this study was: (1) to set up a course in Driver Education and Training at Sidney Public High School to train as many students as possible with the limited time and resources available, and (2) to evaluate this course with respect to course objectives.

Importance of the study. Approximately 8,845[1] high schools today have driver education courses in some form. Because of the great many problems--expense, scheduling, and teacher training--involved, only 5,000[2] of these schools offer behind-the-wheel instruction.

The fact that the accident record for drivers under twenty is disproportionate to the accident records for other age groups tends to support the need for systematic training for driving. High school courses can provide favorable opportunity for youths to acquire the knowledge, skills and attitudes needed for safe driving. The training method of greatest practical promise seems to be a combination "driver education" and "driver training" course given by carefully selected and trained teachers by means of school classes and supervised road practices.

Although this course as inaugurated the first year in Sidney High School did not attain the standards approved by authorities, it did approach those standards by virtue of being organized and incorporated in the curriculum, and as such might serve as an example for similar localities in

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[1]Dorothy Barclay, "Driver Instruction in the School", New York Time Magazine, July 8, 1951, p. 28.

[2]Research Report No. 39. Traffic Engineering and Safety Department, American Automobile Association (Washington 6, D.C., American Automobile Association, November 21, 1951) p. 1.

Montana. Approximately 29 per cent of the high schools in Montana offered Driver Education and Driver Training during the 1951-52 school term.

II. OBJECTIVES

List of objectives. The objectives for this study as they apply to the course in Driver Education and Driver Training are listed below in outline form.

I. To organize the course
   - A. Materials needed
     1. how and where obtained, and costs
   - B. Scheduling
   - C. Membership
   - D. Length and type
   - E. Credit
   - F. Problems encountered and suggested solutions

II. To administer the course
   - A. Course content (classroom work)
   - B. Course content (road training)
   - C. Method of teaching
     1. lecture, panel or group discussion
     2. projects--visiting authorities and field work
   - D. Problems and suggested solutions

III. To evaluate the course with respect to the objectives of course
   - A. Methods used for evaluation

B. Limitations of methods

C. Problems encountered and suggested solutions

III. PROCEDURE

The steps employed in making this study were: (1) preparation for teaching the course, (2) making a survey of related material, (3) organizing and administering the course, and (4) evaluating the course.

Instructor preparation. The instructor took a six weeks course in Safety Education and Driver Training at Montana State University, Missoula, Montana, during the summer of 1949. This course was designed to prepare teachers to teach Safety Education and Driver Training courses in high schools. Supervised experience in teaching driving as well as theoretical aspects of driver education were included. The first three weeks were devoted to general safety education.

Survey of related material. The material summarized in this study is restricted to the more recent literature pertaining directly to the organization, administration or methods of evaluation of other Driver Education and Training courses throughout the country.

Organization and administration of course. The writer made an outline of minimum requirements as suggested

by authorities and an outline of the general course content. These outlines were followed as closely as possible, notations being made where any additions, changes or omissions were necessary.

Evaluation. Since the evaluation was to be made with respect to objectives of the course, a list of those objectives was made. This list will be found in the concluding chapter of this study. The methods of evaluation were of two types: special and general. Included in the special types were the following: (1) objective tests and a final comprehensive exam based on the text, Sportsmanlike Driving, (Washington, D.C., American Automobile Association, 1947); (2) observation in the classroom and during behind-the-wheel instruction; (3) skill tests; (4) eye tests; (5) driver check lists; (6) driver test (instructor's); (7) driver test (Montana Highway Patrol). The above-mentioned objective tests are standardized and recommended by authorities in the field.

General evaluation of the course was done by means of a questionnaire, a copy of which will be found in Appendix A. This questionnaire, accompanied by a form letter over the author's signature, was sent to former students two years after they had become licensed drivers.

Limitations of evaluation methods. Observation in

the classroom and during behind-the-wheel instruction, necessarily subjective by nature, was limited, therefore, by the human element. Due to the fact that a brake reaction detonator and other testing devices were not available, the skill tests were incomplete. The eye tests were crude and by no means conclusive; however, they did indicate the need for further examination. Neither the driver check lists nor the instructor's test was standardized, and the Montana Highway Patrol behind-the-wheel test was also limited by the human element.

A 75.9 per cent return of questionnaires gives good student evaluation of the course in general.

IV. DEFINITION OF TERMS USED

Behind the wheel instruction. The term "behind-the-wheel instruction" is to be interpreted as meaning the teaching of the students in the proper operation of the automobile while they are in or near the driver training car. The car may or may not be in motion.

Driver training. This term usually applies to behind-the-wheel instruction. The term "driver training" wherever used hereafter in this paper applies to both "driver education", which is classroom work preceding or accompanying road instruction, and "driver training".

Field work. This term will be used interchangeably with the term "behind-the-wheel" instruction and is to be interpreted as having the same meaning.

CHAPTER II

SURVEY OF DRIVER EDUCATION AND DRIVER TRAINING LITERATURE

Most of the material written on Driver Education and Training is general in nature, giving an overall picture of the organization, administration and evaluation of courses offered in other schools or suggested by authorities. Only a brief summary of the comparatively recent literature most pertinent to the problem will be given.

Literature on the organization, administration and evaluation of Driver Education and Training. Driver Education and Training is not new. Morse[1] reports schools in various size communities experimenting with Driver Training in 1938. Preliminary instruction was given pupils in the techniques of handling the car, rules of the road and laws involved before they were assigned in groups of four to a car with dual controls. The learner was required to have at least fifteen miles of actual driving under observation before being permitted to take a road test. The major items of expense for the course were: instructor's salary, rental or purchase of car, insurance, and maintenance and operation

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[1]G. D. Morse, "Driver Training For High School Pupils", School and Society, 48:654-55, November 19, 1938.

of car. A full time instructor, it was learned, could teach from one to two hundred pupils per year.

In 1940, the Rural Division of Northern State Teachers College, Aberdeen, South Dakota, began a course in auto driving for grade school children in the Rural Demonstration Schools associated with the College. Before enrolling in the course each pupil was required to submit an application blank signed by both his parents, his critic teacher, and the school board. This application blank outlined the work of the course and emphasized that neither the course nor the certificate issued upon completion of the course entitled the pupil to drive independently, until after he had reached the age required by law. The children drove midget practice cars five miles before being permitted to operate a standard car. Each pupil was required to keep a notebook in which he wrote a synopsis of two lectures, one by an auto-mechanic and one by a policeman. Material on highway safety and a copy of Man and The Motor Car[2] were placed in each school library. Emphasis in every lesson was placed on driver responsibility and safe driving.[3]

During the war many high schools and colleges

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[2]National Conservation Bureau, Man and the Motor Car (New York, National Conservation Bureau, 1941).

[3]M. M. Guhin, "Auto Driving Course for Rural Pupils", National Education Association Journal, 29:90, March, 1940.

instituted Driver Education courses as an aid to the armed services in pre-induction training. A course outline prepared by the War Department, in cooperation with the U. S. Office of Education, and an Instructor's Manual in Pre-Induction Driver Education, prepared by the Office of the Quartermaster General, were made available at the time without charge to educators.[4]

The Bureau of Curriculum Development, Division of Secondary Education, New York State Education Department[5] published a bulletin in 1946 entitled, Driver Education and Training, A Syllabus for Secondary Schools.

> This state syllabus in driver education and training provides for two types of training: (1) classroom instruction in driver education, and (2) actual road training.[6]

The Bureau advocated that the course be offered to pupils who were about to reach the legal age for driving, and suggested that one-half credit be allowed for four or five periods per week per semester. The Bureau suggested scheduling thirty-six pupils per instructor for five periods weekly for one semester with two periods per week devoted to classroom instruction, and the remainder to road training.

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[4]H.R. Danford, "Safety Education in Driver Training", Journal of Health and Physical Education, 14:322, June, 1943.

[5]Bureau of Curriculum Development Division of Secondary Education, New York State Education Department, Driver Education and Training--A Syllabus for Secondary Schools (New York Press, 1946) 36 pp.

[6]Ibid., p. 8.

The Bureau recommended that the entire class meet as a group for the two periods of classroom work per week but that the class should be divided into groups of four students each for road training. These smaller groups were to meet individually for the remaining three periods per week, thus necessitating three full weeks for a complete round of road training of the entire class. Other plans suggested by the Bureau included: (1) one period per week for full year devoted to classroom instruction with road work brought in during study periods; (2) classroom instruction done in school and road work carried on under the supervision of parents or relatives at home. Thirty-two hours were recommended for operation and observation of proper driving practices. No special equipment was considered necessary for classroom work; however, devices for testing physical, mental and emotional characteristics of prospective drivers were thought to be desirable. The purchase, by the school, of a training car with dual controls was recommended. The syllabus outlined the course objectives and the development of content by units.[7]

In a study of Driver Training programs in schools offering the course, Hubbard[8] noted these characteristics:

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[7] Ibid., pp. 1-20.

[8] R. E. Hubbard, "Driver Education and Driver Training", National Association of Secondary School Principals, Bulletin, 30:140-42, April 1946.

(1) the course was most often given to pupils in grades nine, ten or eleven; (2) Man and The Motor Car or Sportsmanlike Driving[9] were most often used as text; (3) Motor Vehicle Transportation in American Life, published by the National Association of Secondary School Principals in cooperation with the National Council for Social Studies and The National Commission on Safety Education of the National Education Association was receiving wide acceptance by the schools offering the course; (4) training cars were most often owned by students or parents, although many were furnished by motor clubs, highway departments, safety organizations and automobile dealers; (5) fifty-three hours was noted as the average length of a one-semester course; (6) costs varied widely; (7) half of the schools used standardized tests in evaluating the course; (8) one-half credit was most often offered for the course. The study suggests that much attention, study and experimentation need to be given to: goals, methods, curriculum, administrative organization, adjustment of training to student maturity, finance, and teacher education.

Two hundred students were taught to drive as a cooperative experiment conducted jointly between the Colorado

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[9]American Automobile Association, Sportsmanlike Driving, (Washington 6, D.C., American Automobile Association, 1947).

Highway Patrol and the Salido Public Schools. As a preliminary to the course the entire student body listened to a lecture by Captain C. R. Cotton of the Colorado Highway Patrol on traffic laws, speed laws, proper kinds of signals, and other factual material, and later were given a test over the material. Groups of four students who wished to learn how to drive were then sent to a field where three patrolmen in cars were assigned to duty for a period of five days. Each quartet was given actual instruction in driving by a patrolman, and each student drove a car (with a patrolman as a passenger) through a marked off course, including "stop signs", "U" turns, parking, etc. Pupils who knocked over more than two stakes going through the course were asked to drive through again until they "ran" the course successfully.[10]

Eleven city schools in Cleveland teach driving as a regular one-credit course, each school having a dual control training car. The classroom work is carried on simultaneously with road training.[11]

The Chicago Lane Technical High School uses dummy cars in the classroom. Road training is given to the

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[10] L. A. Barrat, "Teaching Teen Agers to Drive", American School Board Journal, 113:42, October, 1946.

[11] H. A. Anderson, "Education in Driving", School Review, 55:387, September, 1947.

students after one semester of classroom instruction.[12]

Dubuque, Iowa offers an eight-week course in driver training. The instruction is provided through the cooperation of the high school, city police department, the local safety council and automobile club. Three cars are used simultaneously.[13]

All the high schools in North Dakota require students to pass a test in driver education before graduation.[14]

Maclaurin[15] found these five reasons listed most frequently by schools for not having Driver Training: (1) lack of cars and equipment; (2) lack of trained teachers; (3) lack of public demand; (4) curriculum too crowded; and (5) cost too high.

A summary of Maclaurin's suggested solutions for each follow: (1) arrange for the American Automobile Association to furnish cars free of charge and to provide free teacher training; (2) inform the public of yearly traffic fatalities; (3) time isn't a real problem because time can always be found to do things we want to do; and (4) driver education

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[12] Loc. cit.

[13] Anderson, op. cit., p. 388.

[14] Loc. cit.

[15] E. Maclaurin, "Teach Them to Drive", Survey Graphic, 37:397-99, September 1948.

costs about $31.40 per pupil, or a total of $188,400,000, or about 7 per cent of highway accident costs.[16]

Maclaurin suggests a two-part program: (1) thirty-six hours of classroom instruction plus street observation projects spread over a school year; (2) ten hours of behind-the-wheel instruction spread over two months and given during summer vacation. In evaluating Driver Education and Training he found that surveys made throughout the country seem to prove that Driver Education cuts the accident rate. The driving record of 1027 trained drivers in Rhode Island over a three year period showed a clean slate so far as accidents were concerned.

The Oregon State Department of Education[17] has published a Teacher's Manual for Driver Education and Training. The manual outlines the course in eight separate units and designates the existing course in the school curriculum with which these units might be integrated. All the units are suitable for integration with other courses except behind-the-wheel instruction, which must be given separately.

Huntington Beach High School, Huntington Beach, California had Driver Training before the California State law of 1949 required it. For two years it was offered on a

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[16] Ibid., p. 398.

[17] Oregon Department of Education, Driver Education and Training in The Public Schools of Oregon, A Teacher's Manual (Salem, Oregon: Department of Public Instruction, 1947) 96 pp.

voluntary basis, boys being permitted to take time off from physical education, and girls from study hall, for the course. At the end of the two years, instruction was advanced to the sophomore level, with two instructors engaged in the work concurrently, one in the classroom, the other in the car. Both instructors worked six periods of each school day. Enrollment in each class was limited to twenty students, four of whom received driving experience each day. Each student had the opportunity to drive once a week for eighteen weeks, thus receiving eighteen hours of instruction in the car and seventy-two hours in the classroom. This provided each student with four and one-half hours of actual driving experience. Classroom instruction was carried on through committee work on different phases of Driver Education. The course was outlined in weekly and daily units to provide for flexibility and correlation of activity. The chassis of a junked car, with all parts labeled, was placed in the classroom for recognition purposes. Adequate testing apparatus was available and used frequently to motivate student interest. The training car was furnished by a local automobile dealer through the American Automobile Association, and a street was marked off for a practice area. Behind-the-wheel instructors were expert drivers in order to command the respect of the students.[18] A "Road-Day-O", with

[18]John B. Bestall, "Development of A Driver Education Program", California Journal of Secondary Education, 26:98-102, February, 1951.

competition open to all students, was made a part of the program. Prizes were offered for the best scores as an incentive for good driving.

In a study of present practices in Driver Education in the United States, nine major trends were found which are either facilitating better teaching or are opening up new areas of instruction.

1. National standards for the number of hours to be included in behind-the-wheel instruction and minimum essentials for adequate course.
2. General public recognition of the importance of traffic and Driver Education in the curriculum of the high school.
3. A wealth of new audio-visual instructional material for use in the Driver Education program.
4. Inclusion by colleges and universities of instructional courses in the training of teachers for Driver Education and Driver Training.
5. The recognition of the need of evaluation in the program of Driver Education, through testing, checking and other evaluation techniques.
6. Recognition by many schools that a supporting community public relations program is a definitely needed part of the school program in Driver Education and Training.
7. The recognition of the value of high-school courses in Driver Education by state licensing agencies through acceptance of a certificate of satisfactory completion of a course in Driver Education in lieu of a written examination for a driver's license.
8. Greater cooperation on the part of the schools with national, state and local organizations in studying and developing the program in Driver Education and Training.
9. The development of Adult Traffic and Driver Education Schools using schools' own instructors in the organization of these adult programs.[19]

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[19]A. E. Konold, "Present Practices and Trends in Driver Education", National Association of Secondary School Principals, Bulletin, 35:198-99, March, 1951.

Bish[20] says that his several years of experience with Driver Education has brought into focus two conclusions:

> 1. Driver Education as an integral part of the high school program seems to be rapidly gaining acceptance, not only because it is now generally agreed that the school should assist in the solution of a serious social and community problem, but also more significantly it is believed that the school is uniquely able, through sound teaching procedures, to contribute to the formation of attitudes for safe driving.
> 2. The administrative problems which admittedly require some unorthodox procedures for their solution can, with both professional and financial assistance from the local community, the American Automobile Association, and the National Education Association, be handled satisfactorily.[21]

During the 1950-51 school term, 8,845 schools throughout the United States offered Driver Education in some form to some 750,000 students; however, there were 11,500 schools which did not offer it in any form.[22]

A follow-up study was done in Massachusetts on three groups of high school age drivers. Each group consisted of 500 students, and the survey covered their traffic records from January, 1950 through April, 1951. Total traffic violations, fatalities, involvement in accidents, and suspension of driver licenses for the group with both

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[20]Charles E. Bish, "Present Practices and Trends in Driver Education", National Association of Secondary School Principals, Bulletin, 35:200-202, March, 1951.

[21]Ibid., p. 202.

[22]Dorothy Barclay, "Driver Instruction in the School", New York Time Magazine, July 8, 1951, p. 28.

classroom instruction and road training was thirty-five; for the group with only classroom instruction, thirty-seven; and the group with no training at all, ninety-nine.[23]

This survey of related material indicates the increased awareness of the need for Driver Education and Driver Training in the high school, but it also shows that there are many schools which have not adequately, if at all, provided for this need.

Information gained from this survey aided in organizing the course at Sidney High School and furnished material used for both classroom instruction and public relations.

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[23] Loc. cit.

CHAPTER III

ORGANIZATION

Much of the preliminary work of organization, such as location of sources of material, listing material needed, calculating costs, making a tentative schedule, and outlining course content (classroom instruction and field work), was completed during the summer vacation.

Materials, how and where obtained, and total costs. The list of materials needed was drawn up from those suggested by authorities in the field and the minimum library reference list in the Teacher's Manual for Sportsmanlike Driving.[1]

The automobile dealers of Sidney held a meeting at which it was decided that each dealer would furnish a training car to the school for one year, each drawing a number for his respective year in the rotation. When every dealer had furnished a car for one year, the rotation was to begin once more with the first dealer chosen. The Dodge and Plymouth dealer (Lalonde Motor Company) furnished for the first year a car with dual controls installed. The car had "Driver Training Car, Courtesy of Lalonde Motor Company"

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[1] Teacher's Manual for Sportsmanlike Driving (Washington, D.C., American Automobile Association, 1947) pp. 154-55.

printed on each front door. This car had a standard clutch with fluid drive.

Since the cost of some materials had risen, individual price listings would not prove valid or useful. A detailed list containing various materials, services and their sources will be found in Appendix A. The reader may write to the publisher for current prices of materials listed.

The various materials and services are combined here into three groups with the total cost for each group. The costs are for two semesters in which seventy-nine students were trained. The school had twenty textbooks on hand, necessitating the purchase of only twenty more for the course.

I.	Automobile a. maintenance and servicing b. insurance c. license and taxes d. garage (eight months)	total	$ 306.70
II.	Instructional materials a. testing equipment b. training devices c. text, tests, and references	total	65.84
III.	Instructor's salary a. five-eighths of teaching salary		1750.00
		total	$2122.54

It should be kept in mind that these costs are for one full term and include expenditures for textbooks, references and

other materials which need not be purchased the following year. It would be wise, however, to increase the number of references and supplement the testing equipment and training devices.

Scheduling, length and type of course, credit and membership. The course was added to the school curriculum as a separate subject. It was to be one semester in length, to carry one-fourth credit, and to be required for graduation beginning with the sophomores of the 1949-50 school term.

The Sidney High School operated on an eight forty-five minute period day. The first, fourth, sixth, seventh, and eighth of these periods were available for Driver Training. Sophomores with two study hall periods per day, including one of the above, were enrolled in the course first. Those periods, when an insufficient number of sophomores were free to complete the class membership, were opened to juniors and seniors who did not know how to drive. The class enrollment was limited to forty, five sections of eight students each. Each section of eight was divided into two groups of four for field work. The schedule for the first two weeks of each semester was adopted and followed as shown in Figure I, page 23. The schedule for the third week was repeated each week thereafter for the remainder of the semester. This schedule provided for classroom

DRIVER TRAINING SCHEDULE, FIVE (5) PERIODS PER DAY
FORTY (40) STUDENTS

Period	First week					Second week					Third week					Fourth	
	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T
I	8[a]	C[b]	C	C	C	C	C	C	C	C	C	1[c]	2[c]	1	2	C	1
IV	8	C	C	C	C	C	C	C	C	C	C	1	2	1	2	C	1
VI	8	C	C	C	C	C	C	C	C	C	C	1	2	1	2	C	1
VII	8	C	C	C	C	C	C	C	C	C	C	1	2	1	2	C	1
VIII	8	C	C	C	C	C	C	C	C	C	C	1	2	1	2	C	1

[a]The number eight (8) represents the number of students in each section.

[b]"C" represents classroom work.

[c]The numbers one (1) and two (2) represent road instruction groups of four pupils each.

FIGURE I

instruction Monday through Friday the first two weeks of each semester. Beginning with the third week, Monday only, of each week, was devoted to classroom instruction and the remaining four days used for road training. The road training was given alternately to the two groups of each section. Tuesdays and Thursdays the students in group one received road training; Wednesdays and Fridays, those in group two.

Stanchions and street layout. During the first two weeks of classroom instruction, six stanchions, which are movable uprights for marking off parking stalls and testing lanes on the practice street, were constructed in the manual training class. Directions for constructing these stanchions may be found on page 109 of the Teacher's Manual for Sportsmanlike Driving. Permission was requested and granted by the local police department to mark off a street, one block in length, for a practice area. Signs reading "Detour--- Driver Training Street" were constructed and painted in the Vocational Agriculture shop and were placed at both ends of the practice street.

The practice street was marked off with a yellow line down the center and two parking stalls, one for parallel parking, the other for angle or diagonal parking. The angle parking stall was made at approximately a forty-five degree angle and was six inches wider than the width of the training

car. The parallel parking stall was made by painting a line, the length of the car plus five feet, parallel to the curb. This line was the width of the car plus six inches away from the curb. A vertical line was drawn from the curb to each end of the parallel line. Figure II, page 26, illustrates the plan of the street layout.

Problems and suggested solutions. Scheduling was perhaps the greatest problem faced in the organization of the course. If at all possible, Driver Training periods should be scheduled together, i.e. no other class should be scheduled for the instructor between the Driver Training periods. When it is known in advance that the course will be inaugurated beginning with the fall term, it would be advantageous to register the students in the course prior to spring dismissal for summer vacation.

Before allowing students to register, the instructor should ask for a note from their parents granting them permission to take the course. This will help to reduce any misunderstandings or drop-outs that might occur after the course is in progress.

To order textbooks, reference material, and other supplies before the beginning of the school term would also be wise.

These suggestions indicate the problems encountered in organizing the course at Sidney, and point out those which caused some delay at the beginning of classroom instruction.

PRACTICE STREET LAYOUT FOR DRIVER TRAINING

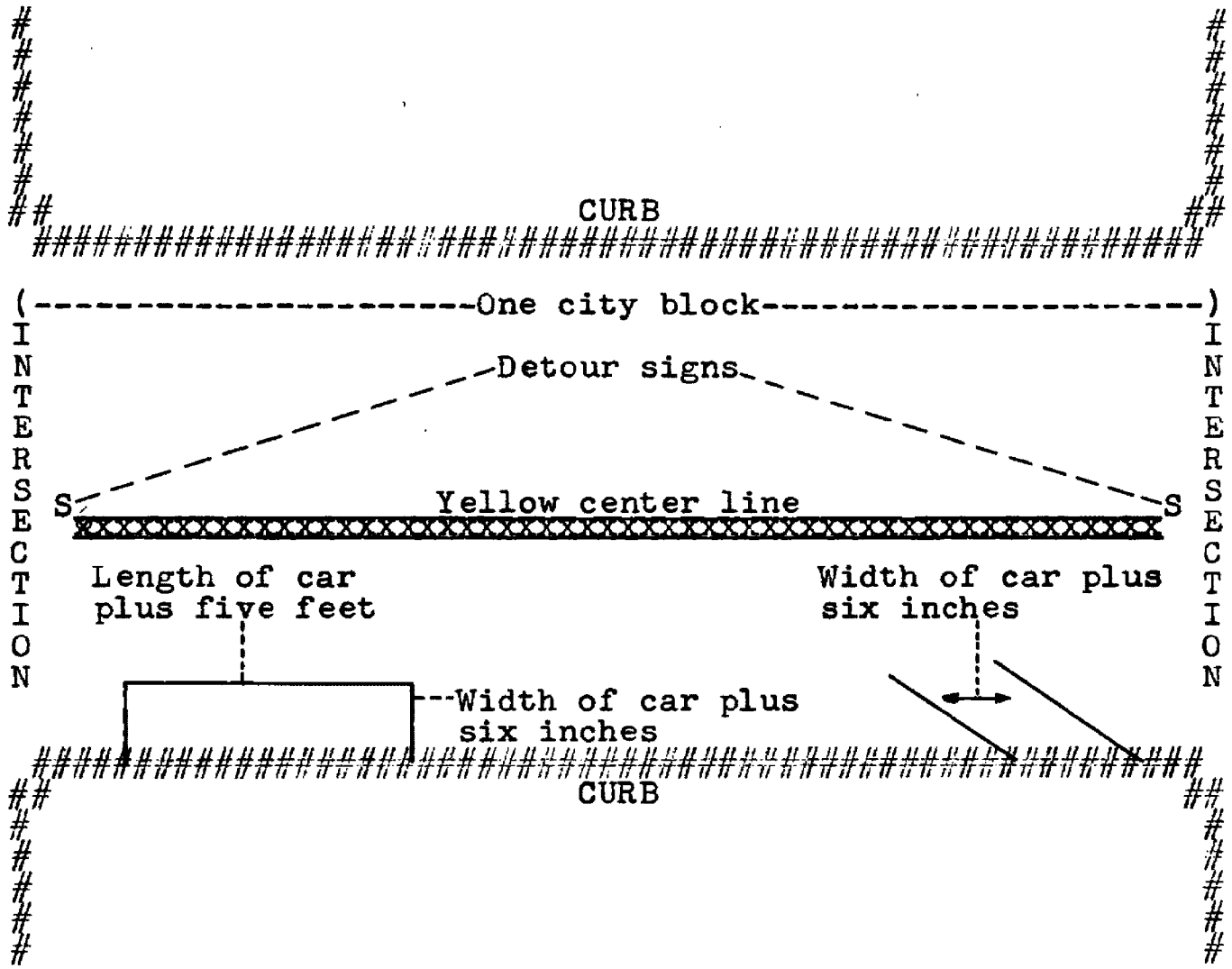

FIGURE II

CHAPTER IV

ADMINISTRATION

While taking the instructor's course in Driver Training at Montana State University, the author formulated two outlines to follow in administering the course. Both of these outlines grew out of classroom discussion and the outlines given in the Teacher's Manual for Sportsmanlike Driving.

The classroom work was divided into eight units, and the outline of the classroom work (see Appendix B, p. 65) presents the time allotments for each unit, order of presentation, materials needed, projects, and references. The field work was divided into seven units with the outline presenting time allotments for each unit, order of presentation, materials needed, projects and references. As the course progressed, the instructor found it necessary to make some changes in the original outlines. Those changes have been incorporated in the outlines as they appear in Appendix B. A third outline of general course content as taken from Let's Teach Driving[1] may be found in Appendix B, pp. 60-64.

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[1] Let's Teach Driving, Administrative Guidebook (Washington 6, D.C., National Commission on Safety Education, National Education Association, 1947) pp. 27-31.

Classroom work. During the first semester, classroom instruction was reduced from eleven consecutive school days to seven, due to problems encountered in organizing the course. To compensate for this loss of time in classroom instruction, the time allotment for the first three units was reduced to a total of fourteen periods instead of the original eighteen as scheduled. Each of the five sections met in the classroom on Friday of the first week and continued to meet there through Monday of the third week of school. The second semester students had the entire eleven days of classroom instruction before beginning behind-the-wheel training. Beginning with the third week and continuing through the remainder of the semester, the class met once a week (Monday) for classroom instruction.

The instructor employed the lecture and group discussion methods of instruction, with emphasis on the latter. It was discovered that very little lecturing was necessary to stimulate questions from the class, as well as class discussion. A portion of each class period was set aside for class projects, administering of tests, and presentation of student reports. The chapters in the text devoted to the different phases of learning to drive were scheduled for discussion on the Monday of the week that particular phase of behind-the-wheel training was taught on the practice street or elsewhere.

Field work. Each section of eight students was divided into two groups of four each. The first of these groups met with the instructor in the driver-training car on Tuesdays and Thursdays of each week, beginning with the third week of school; the second group met on Wednesdays and Fridays of each week. Thirty-two periods of forty-five minutes each were allotted to each group for behind-the-wheel instruction.

Each of the four students in a group was allotted ten minutes per class period behind the wheel of the car, while the other three observed from the rear seat. Five minutes of each class period were allowed for checking the car, changing drivers, and instructor explanations and demonstrations.

In teaching each phase of the field work, the instructor first explained very slowly the skill to be learned by the students. The students were permitted to interrupt the explanation at any time to ask questions. The instructor then performed the operation, explaining again each part of the process as it was executed. Each of the students was then asked to repeat the performance, also explaining each part of the procedure. Those having difficulty learning the skill were asked to repeat the operation several times before going on to the next phase.

Behind-the-wheel instruction for the first fifteen

periods was confined to the practice street which was conveniently located within a block of the high school. Two periods were devoted to d riving around one block before the students were permitted to drive on the open highway. After two periods of driving on the open highway, most of the students had gained enough confidence to drive in urban traffic. Those students who were reluctant to try driving in urban traffic were permitted to drive around the residential area before driving into the heart of the city traffic.

The skill tests required only two periods per group; however,, they were repeated to check for improvement.

CHAPTER V

EVALUATION

Two types of methods were employed in evaluating this course: (1) special, and (2) general. Objective tests, a final comprehensive examination, observation in the classroom and during field work, skill tests, eye tests, driver check lists, instructor's driver test, and the Montana Highway Patrol Driver Test made up the total of special methods used.

For general methods of evaluation it was originally intended to use a questionnaire, personal interview, and control groups. Because of methods used for recording and filing accident reports by both state and local authorities, the author found that traffic record investigations for control groups were almost impossible to obtain. Another difficulty encountered in the use of control groups was the widespread emigration of the drivers to other localities, which also ruled out the personal interview.

The materials, procedure, and results of the different methods used for each type of evaluation are discussed in this chapter under the two classifications, special and general.

Special. The first tests administered were the eye

tests for visual acuity and field of vision. A Snellen Chart was used for the visual acuity test and a cardboard protractor for the field-of-vision test. The visual acuity test resulted in the referral of three students to optometrists. Two of these students were fitted with glasses. The field-of-vision test served only the purpose of showing the students at what angle they could detect objects coming from the sides while looking straight ahead. None of the students were afflicted with what is known as "tunnel vision"; however, several of them had a few degrees less than normal field of vision and were advised to compensate by a turning of the head and reduced speed at intersections and crosswalks.

Neither the device necessary for the reaction time test nor the Brake Reaction Detonator for the braking distance demonstration was available, so these tests could not be administered.

Due to the limited time available for students to gain supervised driving experience, not all of the skill tests were administered. The skill tests used included the following: (1) test of driver's ability to judge position of the car in depth and to the right or left; (2) test of driver's ability to turn the car around in the street easily and smoothly and in a limited space; (3) test of driver's ability to gauge limited space in steering the car both

forward and backward; (4) test of driver's ability to park at an angle; (5) test to determine driver's skill when driving in traffic; (6) test of driver's ability to drive both forward and backward on a straight line one hundred feet long; and (7) test of driver's ability to park parallel. The list of materials and equipment needed, markings necessary, procedure in conducting tests, standards, and the check lists for achievement may be found in the Teacher's Manual for Sportsmanlike Driving (Washington D.C., American Automobile Association, 1947) pages 130-151. The driver check lists were used with these tests as a means of grading students' skill in operating and maneuvering a car.

The purpose of these tests was to measure the degree of expertness attained and to impress upon those tested that there was more to driving than just starting, steering, and stopping the car.

The objective tests and the final comprehensive examination measured only the amount of comprehension and retention by the students of subject matter presented in the classroom. Based on the standards received through the objective tests, fifty-nine of the seventy-nine students who completed the course received a "C" average, two a "D" average, twelve a "B" average, and six an "A" average. For the comprehensive examination given at the end of each semester, three received an "F", fifteen a "D", fifty-four a

"C", five a "B", and two an "A". The three students who failed the comprehensive passed the state driver's test and had done satisfactory field work, and thus were given passing grades for the course.

The instructor's driver test consisted of a check of the student's ability to do the following: (1) check car before starting; (2) drive in city traffic; (3) angle park uptown; (4) parallel park uptown; (5) stop and start on an upgrade; (6) turn around on the highway; and (7) drive backward on a straight line.

The two operations failed most often by the students were numbers four (4) and seven (7), both of which require driving the car backward.

The original enrollment in the class was forty students per semester; however, one student dropped out of school before completing the semester. Of the seventy-nine pupils who completed the course, sixty-nine took the Montana Highway Patrol Driver's Test upon completion of the course; nine had their driver's licenses before taking the course, and one never attempted the test. Sixty-five of the sixty-nine passed the test on their first try and three on their second try. One student who failed the test on her first try had not, at the date of this report, tried again. The four students who failed the test on their first try passed the written test but failed the driving test.

General. The only method used for the general evaluation of the course was the questionnaire, a copy of which may be found on page 57 of Appendix A. A copy of the letter which accompanied the questionnaire may be found on page 58 of Appendix A. In drawing up the questionnaire it was concluded that these four items should be determined: (1) amount of driving done, (2) accident record, (3) benefits derived from course, (4) student reaction to course content. The number of arrests for traffic violations was omitted for fear of student reluctance to answer it and the effect it might have upon their answers to the other questions in the questionnaire. The author had hoped to gain this information through examination of police and highway patrol records, but for reasons previously mentioned, he found it impossible.

The course objectives were not listed on the questionnaire in the form of questions as to benefits gained from the course, because this might have, in a sense, "put words in their mouths".

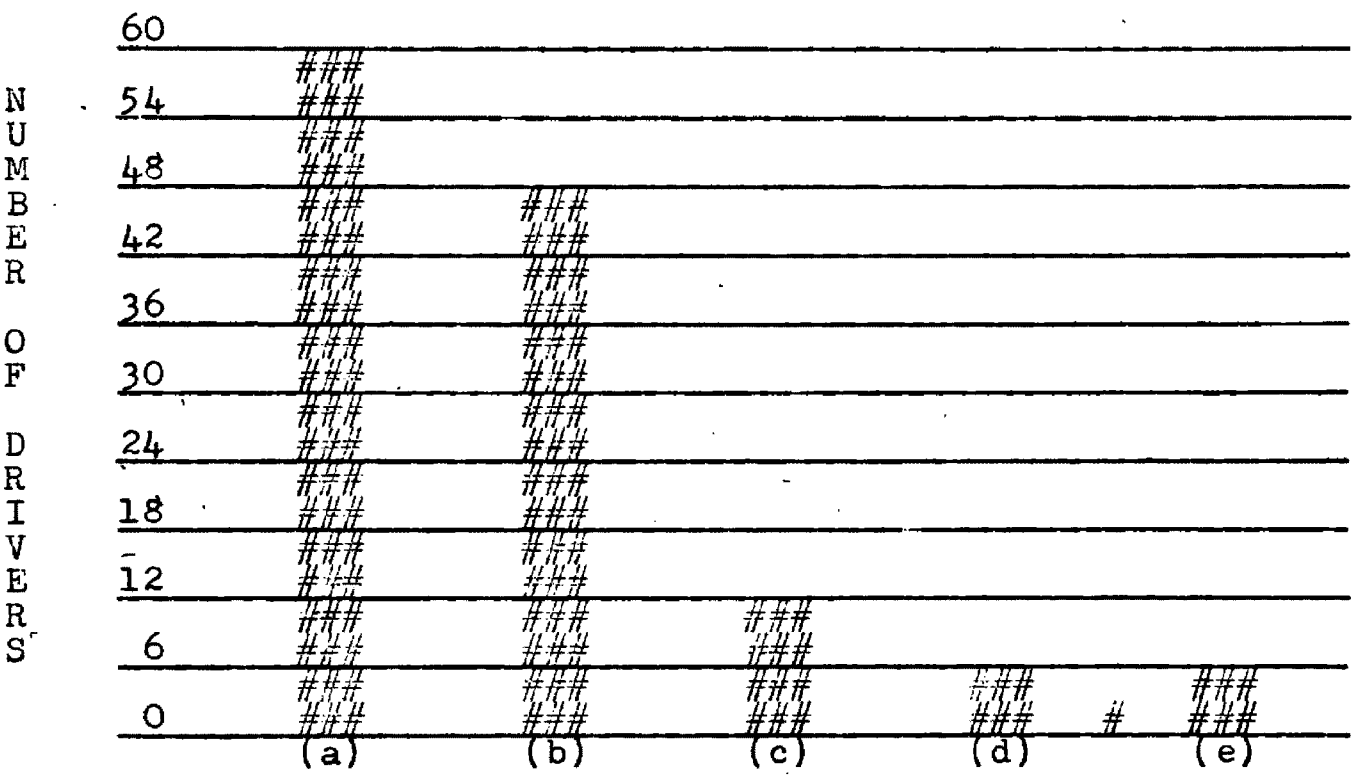
The questionnaire, together with a form letter above the author's signature, and a self-addressed envelope, were sent out to the seventy-nine students two years after their completion of the course. Since the correct addresses for the students were not available, all the questionnaires were sent to Sidney, Montana. A letter was written to the

postmaster of the Sidney post office asking him to forward as many of the questionnaires as possible to the correct addresses. Four questionnaires did not reach the addressees and were returned to the writer. A 75.9 per cent return of the original seventy-nine mailed, or sixty completed questionnaires, was received within three weeks from the date of posting. This rather large per cent of returns seems in itself to indicate an interest in Driver Training on the part of this teen-aged group, and in that sense represents a kind of student evaluation of the course in general.

All of the sixty who returned completed questionnaires had finished the course; fifty-four of them passed the state driver's test on the first try; three, on the second try; one never attempted it; one failed the first try and had not, at the date of this report, tried again; and one had his driver's license before taking the course. Forty-seven drove often during the two-year period, and thirteen drove occasionally. (See Figure III, page 37.)

Five of the students indicated that they had been involved in accidents with two or more cars. Of these, three assumed responsibility for the mishap. Two of the five checked road conditions as the cause of the accident; one checked carelessness; and two checked weather conditions. Two of the accidents resulted in slight personal injuries, and the other three resulted in no personal injuries.

RESULTS OF STATE DRIVER'S TEST, FREQUENCY OF DRIVING, AND ACCIDENT RECORD FOR SIXTY TRAINED STUDENTS JUNE, 1950--JUNE, 1952



(a) Passed State Driver's Test and received drivers' licenses

(b) Drove often

(c) Drove occasionally

(d) Involved in accident with two or more cars

(e) Involved in other accidents

FIGURE III

Property damage for four of the accidents amounted to over one hundred dollars, and the other was under one hundred dollars.

Six drivers had been involved in other types of accidents. Three hit a stationary object; two hit the ditch; and one checked "other" but did not specify. Causes checked were: speed, two; carelessness, two; weather conditions, one; road conditions, one. Although property damage and personal injuries were not listed under this question, the students did indicate this by their explanations. In all cases there were no, or only slight, personal injuries and very little property damage. Only one resulted in property damage in excess of one hundred dollars. One girl explained her accident as being a scratched fender, and one went into the ditch on an icy road. Another boy slid into the ditch practicing to drive. He did not have his driver's license, having never taken the state test because of a physical handicap caused from infantile paralysis which left him with only partial use of his legs and right arm.

Combining the two types of accidents, eleven of the sixty drivers reported having been involved in one or the other. Three of these accidents resulted in slight personal injuries, and five caused property damage in excess of one hundred dollars.

All the drivers indicated that they had benefited by having taken the course and listed from one to three statements each on how they had benefited. These statements, broken down into eight categories with the frequency of appearance of each on the returned questionnaires, are shown in Table I, page 40.

The following are examples of the statements made by some of the students. They are direct quotes and are in the student's own English, spelling, and punctuation. They give a fair cross section of the types of statements made by the drivers.

> "I feel that I have greatly benefitted because I learned not only to drive but I learned all driving rules, to read all the gauges on the car, it gave me confidence. In fact my Dad now trusts me behind the wheel more so than himself. I'm over cautious at all times. I'll never take a chance."
>
> "I have been praised by some officials of the Sun Oil Co. on my careful and courteous driving, this being part of my job."
>
> "I have benefitted in that I have avoided two near accidents as a result of the training. As a result of this training I believe I am a better driver than I would otherwise have been."
>
> "It made me more conscious of traffic rules and the responsibility when driving a car."
>
> "Instead of learning the wrong way, I learned the right way thereby eliminating breaking bad habits."
>
> "I not only feel safer when driving since I took the course but I can help others learn to drive. It helped me much in learning to park, parallel and diagonally."

TABLE I

EVALUATION BY SIXTY STUDENTS OF BENEFITS DERIVED FROM DRIVER TRAINING COURSE

Type of benefit gained from course	Number of times mentioned
Learned fundamentals of safe driving	29
Gained knowledge of traffic laws and safety regulations	23
Learned to park (parallel and angle)	10
Learned responsibility to other drivers and pedestrians	5
Gained confidence in driving	4
Learned what to do in an emergency	5
Learned how to be a courteous driver	2
Learned mechanics of car	2

The suggestions submitted for improvement of the course were classified into sixteen different categories and are shown with the number of drivers making each suggestion in Table II, page 42.

Twenty-three students offered no suggestions for improvement, and twenty-two of the twenty-seven who did suggested that the course be increased in length in order to allow more time for behind-the-wheel instruction and supervised driving experience. Four students suggested that more mechanics and car maintenance be taught in the course; four stated that more practice should be given in night driving, and three thought the course should be expanded to include more students.

TABLE II

SUGGESTIONS OFFERED BY SIXTY STUDENTS FOR IMPROVING DRIVER TRAINING COURSE

Suggested improvement	Number of times mentioned
No suggestions offered	23
Increase length of course (both classroom instruction and behind-the-wheel training)	22
Teach more mechanics and car maintenance	4
Include more practice in night driving	4
Expand course to include more students	3
Teach more on emergency repairs	2
Open course to adults	1
Require course for all drivers under twenty-six years of age	1
Incorporate first-aid instruction in course	1
Devote more time to used car evaluation	1
Give travel information, map reading, etc	1
More emphasis on truck driving and truck regulations	1
Follow State Driver's Manual more closely	1
Devote some time to different makes and models of automobiles on market	1
Use films	1

CHAPTER VI

CONCLUSION

As previously stated, one of the objectives of this study was to evaluate the course with respect to its stated objectives. These course objectives were formulated after some study of what authorities agreed should be attained in a Driver Training course, with modifications to fit the local situation.

To determine more accurately whether or not the course achieved the objectives as set up would necessitate an extensive follow-up study covering a period of from five to ten years, including an investigation of traffic records of the students and perhaps a personal interview with each. Since the evaluation was made two years after the students completed the course, some limitations obviously were present.

The final chapter here is devoted to stating the eight objectives for the course, with conclusions as to the degree of achievement, together with some suggestions for improving the course.

I. Realization and appreciation of the effect of physical, emotional, and mental characteristics on drivers and pedestrians in general. The material for achievement of

this objective was presented under Unit II of the course content. The method for evaluating the effectiveness of the presentation was the objective test covering this unit and the final comprehensive examination. All of the students received a passing grade on the objective test, but three failed the final comprehensive examination. From these results it might be concluded that this objective was reached to some degree by all the students but three; however, objective tests administered several years after presentation of material and personal interviews would perhaps evaluate this more accurately.

II. A recognition of their own deficiencies. The eye tests did this for those who did not have normal visual acuity or adequate field of vision. Judging from the remarks made by students after the skill tests, one might say that they were aware of their deficiencies in the necessary skills for safe driving at that time.

III. A knowledge of steps necessary to remedy or compensate for their deficiencies. Here, again, further testing and personal interviews would be necessary to determine whether or not the students did take the steps necessary to remedy or compensate for their deficiencies. In the case of those who did not have normal visual acuity it is known that they did remedy this deficiency by being

fitted with glasses. The boy who was described as physically handicapped had not, at the date of this report, tried for a driver's license and was still practicing in an attempt to overcome these handicaps.

IV. Establishing in drivers fundamental safety principles and practices. Twenty-nine of the sixty students who returned questionnaires stated that they had benefited from the course by having learned the fundamentals of safe driving, or words to that effect. It might be fair to conclude then that this objective was reached by approximately 50 per cent of the students.

V. Adequate knowledge of driving regulations. Twenty-three students stated that they had gained a knowledge of traffic laws and safety regulations. Considering this number with the number of students who stated they had learned the fundamentals of safe driving, it would seem that adequate knowledge had been attained; however, since both of these benefits were mentioned by some of the students, this conclusion would not be justified. The fact that twenty-two students suggested that the course be increased in length seems to indicate that they felt a need for more knowledge in all phases of the course content. Taking into account these figures, it might be stated that approximately 50 per cent of the students felt that they had gained adequate knowledge of driving.

VI. Adequate skill in safe driving practices. In view of the fact that twenty-two students suggested the course be increased in length for both classroom instruction and behind-the-wheel training, and that four students failed the state driver's test on their first try, it might be said that this objective was not fully attained. The results of the skill tests would also indicate the need for more skill; however, to attain an adequate amount of skill would require much more driving experience than a course of this type offered. It is possible that this skill might be gained after the student has taken the course and is aware of the skills necessary.

VII. Establishment of correct driving habits. This objective was reached to the same degree as the fourth objective, since the criterion for evaluating was the same.

VIII. Building the proper attitudes toward other drivers and pedestrians. Five students indicated that they had learned responsibility to other drivers and pedestrians, and two stated that they had learned to be courteous drivers. This is rather poor evidence of building of proper attitudes. It is thought that personal interviews and observation of the students as they now drive would bring to light further evidence of proper, or improper, attitudes.

In drawing a conclusion as to the worth of the course in general, it would seem that the evidence is favorable.

All of the students stated that they had benefited by having taken the course. Only five students had been involved in accidents causing property damages over one hundred dollars. None of these accidents resulted in serious personal injury. Two of these accidents were the fault of the other party involved, according to the statements made by the drivers. Among sixty trained drivers over a period of two years, three were at fault in accidents resulting in property damages over one hundred dollars and slight personal injury. These facts would tend to indicate that some good has come from the course.

Suggestions for improving the course. The following suggestions would increase the efficiency of a Driver Training Course:

I. Restrict enrollment in course to sophomores after course has been in operation in school for two years. The course should be open to juniors and seniors the first two years to catch those who do not know how to drive. The sophomores seem to be the most logical group to receive the course, because most of them have either reached or are nearing the legal age for driver licenses.

II. Limit number of students per class to six and divide each class into two groups of three students each

for behind-the-wheel training. This would allow each student more time behind the wheel to improve his driving skills.

III. Mix the groups for behind-the-wheel training so that there is at least one boy and one girl in each group. Boys like to show girls that they are better drivers, while the girls have a desire to prove the opposite. This competition between the boys and the girls seems to motivate both to increased effort for better driving.

IV. Increase each student's driving time to a full period after the first two weeks of field work, rotating the days for driving rather than have each student drive for a short time every day of his field work. Short driving periods do not permit the student to get the "feel" of the car or the road for safe driving practice.

V. Invite parents to ride in training car with students during field work and also to visit the classroom. When parents see that their children can drive a car, they are more willing to allow them to practice with the family car. Classroom visitation by the parents helps to build proper community attitude toward the course.

VI. Provide adequate library references and testing devices. Students need a variety of sources for reference work, and testing devices are an incentive for the perfection of driving skills.

VII. If possible, arrange with study-hall supervisors to administer the objective tests. This would increase the time available for presentation of subject matter and classroom discussion.

VIII. The word "test" seems to cause many students to become nervous and tense. The writer feels that more information would be acquired and retained if the students were allowed to use their books for the objective tests. He also suggests that no check list be used or mention of a test be made when giving the students field tests.

IX. The instructor should have some knowledge of auto-mechanics and be a better than average driver. To keep the respect of the students the instructor must be able to answer their questions on the mechanics of the car, and he must also be able to perform smoothly all of the maneuvers to be taught.

In conclusion the suggestion is made to administrators contemplating the introduction of the course in their schools that they first pave the way by informing the public of the need. This can be done by showing the community the results of surveys made throughout the United States as to the effect of Driver Training Courses in reducing accidents. When parents realize the important part that the course plays in reducing the cost in lives and money for accidents and traffic violations, they will cooperate and accept the course as a necessary subject in the curriculum.

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BIBLIOGRAPHY

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C. PUBLICATIONS OF LEARNED ORGANIZATIONS

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Driver Education and Training in the Public Schools of Oregon--A Teacher's Manual, Salem, Oregon: Department of Public Instruction, 1947. 96 pp.

APPENDIX "A"

LIST OF MATERIALS, SERVICES AND SOURCES, QUESTIONNAIRE, AND FORM LETTER

LIST OF SOURCES AND MATERIALS FOR DRIVER TRAINING COURSE AT SIDNEY PUBLIC HIGH SCHOOL--1949-50

I. American Association of Motor Vehicle Administration
Woodward Bldg., Washington D. C.

1. Driver License Examination Procedure, 1939. 78 pp.
2. Minimum Driver License Examination Standards, 1939, 25 pp.

II. American Automobile Association
Washington 6, D. C.

1. Text (Sportsmanlike Driving, Sec. Ed.) 1948. 455 pp.
2. Objective Tests (forms A, C, D, E, F, G, H, & I) 1939 one hundred copies of each
3. One set of check lists, 1947
4. Home Driver Training Guide--one set
5. Teaching Manual, 1947. 157 pp.
6. Driver Testing and Training Devices, 1946, 11 pp.
7. Plans for Building Driver Tests, 1946, 26 pp.
8. Digest of Motor Laws
9. Driver Reduces Traffic Accidents one-half, 1945.
10. How Cities Protect Pedestrians, 1945, 40 pp.
11. Interstate Highways--A High-Type Network by Major Free Roads, 1946. 24 pp.
12. Parking Manual, 1946. 181 pp.

III. General Motors Corporation
Detroit, Michigan

1. A Power Primer, 1944. 114 pp.
2. Charts on Automobile Development
3. We Drivers, 1949. 36 pp.
4. The Automobile User's Guide, 64 pp.

IV. LaLonde Motor Company
Sidney, Montana

1. Dual control car
2. Gasoline, oil, and grease
3. Miscellaneous repairs

V. Little Brown and Company
Boston, Massachusetts

1. Traffic Courts, Warren, George, 1942. 280 pp.

VI. McGraw-Hill Book Company Incorporated
New York City, New York

1. Everyday Automobile Repairs, 1946. 296 pp.

VII. Midland Lumber Company, Sidney, Montana

1. Screen door springs
2. Wood screws
3. Dowels

VIII. National Commission on Safety Education of the National Education Association
1201 16th Street, Washington, D. C.

1. Safety Education (18th Yearbook) 1940. 412 pp.
2. Let's Teach Driving, 1947. 129 pp.

IX. National Conservation Bureau
One Park Avenue
New York City, New York

1. Man and the Motor Car, Whitney, Albert W., Editor, 1941. 303 pp.
2. Administrator's Manual, 1945. 19 pp.
3. Teacher's Manual, 1945. 61 pp.
4. Behind the Wheel, 1945. 37 pp.
5. Traffic Accident Prevention Through Motor Vehicle Inspection, 1945. 26 pp.

X. National Conservation Bureau and Safety Division, International Association of Chiefs of Police
Evanston, Illinois

1. Traffic Engineering and the Police, 1938. 92 pp.

XI. National Safety Council
20 North Wacker Drive
Chicago, Illinois

1. Accident Facts, Annual Publication
2. Speed Regulation, 1941. 63 pp.
3. Studying the Danger Spots in Traffic, 1946. 6 pp.
4. The Public's Attitude on Traffic Safety, 1946. 40 pp.
5. Tests for Intoxication, 1941. 9 pp.
6. Winter Accident Prevention, 1947.

XII. State and County
Montana and Richland

1. License
2. Taxes

XIII. Turner Insurance Agency
Sidney, Montana

1. Public liability
2. Public damage
3. Comprehensive
4. Collision or upset

QUESTIONNAIRE

Check one

I. Did you complete the Driver Training Course? Yes__ No__

II. Did you pass the state driver's test? First try__
Second__ Not at all__

III. Did you receive your driver's license? Yes__ No__

IV. Have you continued to drive? Occasionally__ Often__

V. Have you been involved in any accident with two or more cars involved? Yes__ No__ (If answer is yes, check a, b, c, & d below)

a. Who was at fault? You__ Other party__

b. Cause? Speed__ Weather conditions__ Road conditions__
Condition of driver__ Condition of car__
Carelessness__ Reckless driving__
Moving traffic violation__
Other_____

c. Property damage? Under $100__ Over $100__

d. Personal injuries? Slight__ Serious__ Fatal__

VI. Have you been involved in any other type of accident? Yes__ No__. (If answer is yes, check a or b below.)

a. Type? Upset__ Hit stationary object(tree,pole,etc.)__
Ditch__ Other_____

b. Cause? Speed__ Weather conditions__ Road conditions__
Condition of driver__ Condition of car__
Carelessness__ Reckless driving__ Moving
traffic violation__ Other_____

VII. Do you feel that you have benefited by having taken the course? Yes__ No__

VIII. Give brief examples of how you have, or have not, benefited by having taken the course.

_____

_____

IX. Do you have any suggestions as to how the course may be improved?

_____

_____

Missoula, Montana
June 16, 1952

Dear

I am making a study of the Driver Training Course inaugurated in Sidney Public High School during the 1949-50 school term. When the study is completed it will be presented to the Education Department of Montana State University in partial fulfillment of the requirements for the Master of Education Degree.

Having taken the course, your answers to the questions in the enclosed questionnaire are necessary for a proper evaluation of the course. Your honest answers to the questions and suggestions for improving the course will be very helpful in making this evaluation.

I hope to complete this survey of former students by July 15, 1952 so will appreciate your prompt attention to the enclosed questionnaire.

Thank you.

Yours truly,

R. P. Koch
724 Eddy Avenue
Missoula, Montana

APPENDIX "B"

OUTLINES FOR DRIVER TRAINING COURSE

OUTLINE OF GENERAL COURSE CONTENT*

I. General Course Content (Classroom Work)

A. Motor vehicle transportation in American life

1. Growth of motor vehicle use in terms of number, and types of vehicles, highway development, and mileage traveled
2. Family use of automobiles for business, pleasure and recreation
3. Community use of motor vehicles for school transportation, police and fire protection, transportation of the sick and injured, and functions of government
4. Commercial use of trucks, busses, and taxicabs
5. Inefficiencies in motor vehicle use as reflected by number and severity of accidents (and resulting economic loss and human suffering) and by traffic delays and congestion
6. Buying, selling, fueling, servicing, and repairing motor vehicles
7. Control of motor vehicles use through education, enforcement, engineering, legislation, licensing, and registration.

B. Human capabilities and limitation for driving and walking

1. Importance of cooperative attitudes
2. Knowledge necessary for efficient driving
3. Emotions and the part they play in driving
4. Formation of good driving habits
5. Physical fitness as related to efficient driving
   a. Developing the kinesthetic sense
   b. Driver and pedestrian reaction times related to vehicle speeds
   c. Vision in relation to traffic movements
   d. Eye-hand and eye-foot coordination in driving

*This outline was taken from Let's Teach Driving, An Administrative Guidebook, (Washington 6, D. C., National Commission on Safety Education, National Education Association, 1947, pp. 27-31.

e. Hearing, strength, and steadiness in relation to driving
f. Relationship of permanent and temporary physical deficiencies to driving

6. Developing skill in driving
7. Use of tests to measure human abilities related to driving

C. Characteristics of streets and highways

1. Road surface as it affects starting, turning, stopping and night visibility
2. Road widths, shoulders, lanes channelizing islands, medial strips, and reflecting delineators
3. Curves, turns, hills, and intersections as they affect speed and sight distance
4. Types and functions of signs, signals, and road markings
5. Recent examples of highway design

D. Laws governing the use of motor vehicles, and penalties for non-observance

1. Motor vehicle operators' and chauffeurs' licenses
2. Motor vehicle registration and certificate of title
3. Financial responsibility of operation of motor vehicles
4. Regulation of traffic on streets and highways, including both state laws and city ordinances
5. Vehicle inspections

E. The motor vehicle as a mechanical device

1. Construction and principles of operation
2. Driving practices as they affect the life of vehicles
3. Preventive maintenance

F. Consumer values in automobile ownership and operation

1. Selecting and buying a motor vehicle, especially a used car
2. Relationship of driving practices to conservation of gas, oil, tires, and engine
3. Functions of accessories
4. Relationships with city and state governments (titles, registrations, licenses, and inspections)

5. Avoiding personal liability through sound driving, purchase of insurance, care in loaning car to others, refraining from transporting hitchhikers, and locking car when leaving it unattended
6. Buying fuel, oil, lubricants, anti-freeze, service and repairs
7. Tools and equipment for owner maintenance
8. Reading road maps and planning trips

G. How to operate a motor vehicle

1. Fundamentals of driving
   a. Understanding the driving controls, safety devices, and gauges
   b. Differences in the driving controls among vehicles
   c. Starting the engine
   d. Starting the car, steering, shifting gears, and stopping
   e. Executing maneuvers of backing, turning around, starting on grades, and parking
2. Practices that mark the efficient driver
   a. Understanding the physical laws of motion as they affect vehicle operation
   b. Driving in accordance with changing road and traffic conditions
   c. Speed control
   d. Poise and smoothness at the wheel
   e. Showing consideration for other traffic
   f. Avoiding dangers from mistakes of others
   g. Parallel parking

H. Skills in handling difficult driving problems and in meeting emergencies

1. Night driving
2. Emergency parking on the highway
3. Avoiding trouble in wet weather and winter driving
4. Driving through fog and smoke
5. Avoiding skids in starting, turning, and stopping on wet, icy, or sandy pavements
6. Getting out of a skid
7. Driving through soft sand, mud, and snow
8. Driving back onto pavement from shoulder
9. Avoiding streetcar tracks and ruts
10. Driving on rough roads

I. Relationship of drivers to non-motor vehicle traffic
   1. Pedestrian rights-of-way
   2. Reasons for pedestrian accidents
   3. Driver's responsibility for pedestrians
   4. Bicycle riding regulations
   5. Causes of bicycle accidents
   6. Driver's responsibility for bicyclists
   7. Driver's responsibility for livestock on highways

J. Driver examining and licensing

   1. Minimum legal driving ages
   2. Types of examinations given various states
   3. The driver's license as a privilege granted by the state
   4. Suspension and revocation of drivers' licenses

K. Traffic accidents---national, state, and local

   1. Types of traffic accidents
   2. Extent and costs
   3. The accident pattern
      a. Hour, season, and other time factors
      b. Locations
      c. Weather and visibility conditions
   4. Causative factors
      a. Driver errors
      b. Mechanical defects in vehicles
      c. Defects in streets and highways

L. Controls over vehicles, streets, highways, and their users

   1. Highway and traffic engineering
   2. Education
   3. Enforcement by the police and the courts
   4. Motor vehicle administration, including accident records
   5. Legislation

M. Outlook for the future

   1. Hazards in our present older cars
   2. Improvements in streets and highways
   3. Improvements in design of motor vehicles
   4. Increase in numbers of vehicles and drivers
   5. Possible legislative restrictions
   6. Responsibility of the individual driver

II. Course Content (Road training)

A. Learning to drive a motor vehicle

1. Understanding the driver's compartment
   a. Safety equipment used by the driver
   b. Controls used in driving
   c. Learning to use the instrument panel
   d. Checking vehicle and driver before starting
2. Starting and stopping the engine
3. Starting, steering, and stopping the car
4. Shifting gears
5. Using the brakes in stopping from different speeds
6. Using engine compression as a brake
7. Giving signals and turning corners
8. Executing maneuvers
   a. Backing
   b. Turning around
   c. Starting on grades
   d. Parking
9. Driving in urban traffic
10. Driving in rural areas
11. Driving on the open highway
12. Executing driving skill exercises
13. Tests in driving

OUTLINE OF TIME ALLOTMENTS FOR EACH UNIT IN CLASSROOM WORK, ORDER OF PRESENTATION, MATERIALS NEEDED, PROJECTS AND REFERENCES*

I. Unit I--Motor Vehicle Transportation in American Life

- A. Time
  - 1. one period
- B. Material
  - 1. text, chap. 1
- C. Projects
  - 1. none
- D. References
  - 1. Automobile Facts and Figures
  - 2. Charts on automobile development
  - 3. Accident Facts
  - 4. Man and the Motor Car
  - 5. Public Safety Memos

II. Unit II--Human Capabilities and Limitations for Driving and Walking

- A. Time
  - 1. seven periods
- B. Material
  - 1. text, chaps. II, III, IV, V, VI, VII, and VIII
  - 2. Snellen chart
  - 3. cardboard protractor
  - 4. objective test -- The Driver
- C. Projects
  - 1. different eye tests
  - 2. text, p. 93, No. 3 **
- D. References
  - 1. Accident Facts
  - 2. Driver Training Reduces Accidents One-Half
  - 3. Plans for building driver tests
  - 4. Driver license examination procedure

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* This outline was formulated for use with the text, Sportsmanlike Driving, Second Edition, (Washington 6, D.C. American Automobile Association, 1948) 455 pp.

** The projects listed with text page and number are explained in the text on the page indicated and after the number of the project given.

5. Man and The Motor Car
6. Uniform Vehicle Code
7. Chemical Tests Are Fair
8. How Cities Protect Pedestrians
9. Personal Factors in Safe Operation of Motor Vehicle
10. Psychology and the Motorist
11. Tests for Intoxication
12. Why We Have Automobile Accidents

III. Unit Three---How to Operate a Motor Vehicle

A. Time
   1. ten periods
B. Material
   1. text, chaps. XII, XIII, XIV, XV, XVI, XVII, and XVIII
      a. two periods each for chaps. XIV and XV
   2. Objective tests, How to Drive, and Driver Pedestrian Responsibilities
   3. Automobile charts
C. Projects
   1. Assign students some part of motor or instrument panel on which to give a report
   2. text, p. 289, No. 4; p. 330, Nos. 2 & 3
   3. others suggested by students
D. References
   1. Man and The Motor Car
   2. A Power Primer
   3. Winter Accident Prevention
   4. Accident Facts
   5. Pedestrian Safety
   6. State Motor Vehicle Code
   7. Speed Regulations
   8. Passing Practices on Rural Highways
   9. Distance and Time Required to Overtake and Pass Cars

IV. Unit Four--Characteristics of Streets and Highways

A. Time
   1. one period
B. Material
   1. text, chap. IX
   2. discarded tire or piece of tread from tire
   3. small scale
C. Projects
   1. text, p. 148, No. 4
   2. make road signs
D. References
   1. Traffic Engineering and the Police

V. Unit Five--Laws Governing The Use of Motor Vehicles and Penalties for Non-observance, Relationship of Drivers to Non-motor Vehicle Traffic and Driver Examining and Licensing

A. Time
   1. two periods
B. Materials
   1. text, chaps. X and XI
   2. objective test, Sound Driving Practices
C. Projects
   1. text, p. 177, No. 9; p. 196, No. 6
D. References
   1. Digest of Motor Laws
   2. Uniform Vehicle Code
   3. State Motor Vehicle Code
   4. Traffic Courts
   5. Man and the Motor Car
   6. Model Traffic Ordinances
   7. Report of Commission on Laws and Ordinances
   8. Enforcement for Traffic Safety
   9. Local Traffic Regulations

VI. Unit Six--Consumer Values in Automobile Ownership

A. Time
   1. two periods
B. Materials
   1. text, chaps. XIX, and XX
   2. old inner tube and two tube patching kits
C. Projects
   1. text, p. 346, No. 5; p. 372, Nos. 1 and 5
D. References
   1. Man and the Motor Car
   2. Everyday Auto Repairs
   3. Traffic Accident Prevention Through Motor Vehicle Inspection

VII. Unit Seven--Traffic Accidents, National, State, and Local, Controls Over Vehicles, Streets, Highways, and Their Users, and Outlook For The Future

A. Time
   1. two periods
B. Materials
   1. text, chaps. XXI, XXII, XXIII, and XXIV
C. Projects
   1. text, p. 396, Nos. 4 and 8; p. 411, No. 5; p. 432, No. 1

D. References
   1. Automobile Facts and Figures
   2. Man and The Motor Car
   3. Parking Manual
   4. Manual on Uniform Traffic Control Devices for Streets and Highways
   5. Pedestrian Safety
   6. Traffic Engineering and the Police
   7. Motor Vehicle Traffic Condition in U. S.
   8. Interstate Highways--A High Type Network for Major Free Roads
   9. Studying Danger Spots in Traffic
   10. The Public Attitude on Traffic Safety

VIII. Unit Eight--Final Examination

A. Time
   1. one period
B. Materials
   1. all chapters in text
   2. Comprehensive objective test
C. Projects
   1. none
D. References
   1. none

OUTLINE OF TIME ALLOTMENTS FOR EACH UNIT IN BEHIND-THE-WHEEL INSTRUCTION, ORDER OF PRESENTATION, MATERIALS NEEDED, PROJECTS AND REFERENCES*

I. Unit One--How the Automobile Runs and Understanding the Driver's Compartment

- A. Time
  - 1. one period**
- B. Objectives
  - 1. to learn types of gauges, safety aids, and starting and control devices in driver's compartment
  - 2. to learn the parts of a car involved in its mechanical operation
  - 3. to learn to check car and driver before starting
- C. Materials
  - 1. text, chaps. XII, XIII, and XIV
  - 2. driver training car
  - 3. charts and diagrams of cutaways
- D. Projects
  - 1. Have each student draw diagram of instrument panel of: (1) family car: (2) different make from family car

II. Unit Two--Starting and Stopping the Engine

- A. Time
  - 1. one period
- B. Objective
  - 1. learning how to start the engine
- C. Materials
  - 1. text, chap. XIV
  - 2. driver training car
- D. Projects
  - 1. none

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* This outline was taken from the Teacher's Manual for Sportsmanlike Driving (Washington 6, D. C., American Automobile Association, 1947) pp. 88-129, and revised to fit the course as it was organized and administered at Sidney, Montana.

** This time allotment is for each group of four students.

III. Unit Three--Starting, Stopping, Steering Car and Shifting Gears

A. Time
   1. five periods
B. Objectives
   1. starting, steering, and stopping car
   2. shifting gears
   3. using brakes in stopping in different gears and from different speeds
   4. use of correct stopping signal
   5. use of engine compression as a brake
C. Materials
   1. text, chap. XIV
   2. driver training car
   3. practice area (marked off street)
   4. eight stanchions
D. Projects
   1. none other than practice in perfecting skills learned thus far

IV. Unit Four--Executing Maneuvers

A. Time
   1. fifteen periods
B. Objectives
   1. giving signals and turning corners
   2. backing
   3. turning around
   4. parking
C. Materials
   1. text chaps. XV and XVII
   2. driver training car
   3. practice street and stanchions
D. Projects
   1. continued practice in new skills

V. Unit Five--Driving in Rural Areas and on the Open Highway

A. Time
   1. two periods
B. Objectives
   1. to develop skill in handling car on open highway
   2. starting on grades
C. Materials
   1. driver training car
D. Projects
   1. practice in driving on open highway

VI. Unit Six--Driving in Urban Traffic

- A. Time
  - 1. four periods
- B. Objectives
  - 1. to develop skill in handling car in city driving
- C. Materials
  - 1. driver training car
  - 2. selected route in city
- D. Projects
  - 1. practice in city driving

VII. Unit Seven-Executing Driving Skill Exercises and Tests

- A. Time
  - 1. four periods
- B. Objectives
  - 1. to measure degree of expertness
  - 2. to create the feeling, on the part of those tested, that there is more to driving than just starting, steering, and stopping the car
- C. Materials
  - 1. driving skill tests and check lists
  - 2. driver training car
  - 3. stanchions
  - 4. practice street
- D. Projects
  - 1. practice in performing the skill tests